REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 4-7 are presently active in this application, Claims 4, 6 and 7 having been amended and Claim 5 canceled by the present amendment, and Claims 1-3 and 8-17 having previously been withdrawn from consideration.

In the outstanding Office Action Claims 4-7 were rejected under 35 USC §102(e) as being anticipated by Sambonsugi (U.S. Patent 6,335,985).

In light of the outstanding rejection, and to clarify a distinction over the applied Sambonsugi patent, Claim 5 has been canceled and Claims 4, 6, and 7 have been amended. Accordingly, amended Claim 4 defines an object extraction method including setting, as a provisional region of an extraction object, one of the candidate regions which exhibits a largest difference between a statistical characteristic of inside pixel values and that of outside pixel values to generate initial shape data representing the provisional region. Support for the amendatory language is found in Applicants' disclosure of the third embodiment of FIGS. 10-13C, and no new matter has been added.

Sambonsugi discloses extracting an object region on a current frame by obtaining the intersection between object region candidates (see Abstract and FIGS. 1 and 27). Sambonsugi further discloses pasting data obtained by extracting and reducing shape data of a reference block on a currently processed block (see FIG. 47). However, Sambonsugi does not teach setting as a provisional region of an object one of plural prepared candidate regions of shape data which exhibits a largest difference between a statistical characteristic of inside pixel values and that of outside pixel values, as stated in amended Claim 4.

The outstanding Office Action states a finding that "setting as a provisional region of an object one of plural prepared candidate regions of shape data which exhibits a largest difference (absolute difference or difference) between a statistical characteristic of inside pixel values (texture picture) and that of outside pixel values (background picture)" is

disclosed in Sambonsugi, column 40, lines 5-20, column 43, lines 10-30, and column 6, lines 62-63. However, Sambonsugi discloses dispersion values in a texture picture which are calculated in units of blocks (column 40, lines 5-20), a difference value between pixels of the textured picture and background picture (column 43, lines 10-30), and an absolute value of a difference from the background picture (column 6, lines 62-63). Sambonsugi does not teach setting as a provisional region of an extraction object, one of the candidate regions which exhibits a largest difference between a statistical characteristic of inside pixel values and that of outside pixel values to generate initial shape data representing the provisional region, as stated in amended Claim 4, and particularly is silent with respect to any determination of ;the largest difference between a statistical characteristic of inside pixel values and that of outside pixel values.

On the contrary, according to Sambonsugi, difference images fd(i – 1, i) and FD(i, i + 1) are obtained on the basis of the inter-frame differences between the current frame f(i) and the first reference frame f(i – 1) and between the current frame f(i) and the second reference frame (i + 1). Background regions are respectively determined for polygons Rd(i – 1, i) = R(i – 1) or R(i) and RD(i, i + 1) = R(i) or R(i + 1), and the remaining regions are selected as object region candidates. By obtaining the intersection between these object region candidates, an object region O(i) on the current frame f(i) can be extracted.

In contrast, the claimed invention extracts an image contour by matching a contour of the initial shape data to a contour of the extraction object by using current image data and the initial shape data. In other words, the contour of the provisional region of an extraction object is modified to match the contour of the extraction object. Applicants' claimed invention thus clearly differs from Sambonsugij, and accordingly, it is respectfully submitted that the outstanding rejection has been overcome and amended Claims 4, 6, and 7 are allowable.

Consequently, in view of the present amendment, Claims 4, 6 and 7 are believed to be in condition for formal allowance, and an early and favorable action to that effect is respectfully requested.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.

Customer Number
22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 08/03)

I:\ATTY\EHK\AMEND-RESPONSES\0039\198803US-AMT.DOC

Eckhard H. Kuesters
Attorney of Record
Registration No. 28,870